

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OKLAHOMA**

ALLEN, ALLEN & ASSOCIATES, L.L.C.,)
and ALLEN, ALLEN & ASSOCIATES)
MANUFACTURING, L.L.C.)

Plaintiff,)

v.)

SERVA CORPORATION,)

Defendant, et al.)

Case No. 10 CV-707-GKF-TLW

**PLAINTIFFS' AND THIRD PARTY DEFENDANT'S
OPENING CLAIM CONSTRUCTION BRIEF**

Submitted by:

Margaret S. Millikin, OBA #13736
Gerald L. Jackson, OBA #17185
CROWE & DUNLEVY
A Professional Corporation
500 Kennedy Building
321 South Boston Avenue
Tulsa, OK 74103-3313
(918) 592-9820
(918) 599-6306 (Facsimile)
gerald.jackson@crowedunlevy.com
margaret.millikin@crowedunlevy.com

-and-

Gary Peterson, OBA #7068
Attorney At Law
211 N. Robinson Ave.
Suite 450 South
Oklahoma City, Oklahoma 73102
(405) 606-3367
gp@garypeterson.com

August 6, 2012

TABLE OF CONTENTS

I.	INTRODUCTION	4
A.	Background.....	5
B.	The '330 Patent	5
1.	Inventorship	5
2.	Summary of the Invention of the '330 Patent	5
II.	CLAIM CONSTRUCTION LAW	8
A.	Intrinsic Evidence	8
B.	Prosecution History	9
C.	Extrinsic Evidence and Expert Testimony	10
D.	The Accused Product.....	11
III.	DISCUSSION.....	11
A.	Level of Ordinary Skill in the Field of Powder Mixers.....	11
B.	Claim Construction.....	12
1.	"Annularly"	12
2.	"Alternating Arrangement"	13
3.	Claim 17	15
a.	"Annularly" and "Alternating Arrangement"	15
b.	Central Recirculation Line.....	17
4.	Claim 11	18
C.	Application of the Proposed Construction to the Accused Allen Mixer	20
IV.	CONCLUSION	21

TABLE OF AUTHORITIES

	Page(s)
CASES	
<i>Caterpillar Tractor Co. v. Berco, S.p.A.</i> , 714 F.2d 1110 (Fed. Cir. 1983)	9, 18
<i>Daiichi Sankyo Co. v. Apotex, Inc.</i> , 501 F.3d 1254 (Fed. Cir. 2007)	12
<i>Intellectual Prop. Dev., Inc. v. UA-Columbia Cablevision of Westchester, Inc.</i> , 2002 WL 10479 (S.D.N.Y. 2002)	10

<i>Key Pharmaceuticals v. Hercon Laboratories Corp.</i> , 161 F.3d 709, 48 U.S.P.Q.2d 1911 (Fed. Cir. 1998)	8, 10
<i>Lava Trading, Inc. v. Sonic Trading Management, L.L.C.</i> , 445 F.3d 1348 (Fed. Cir. 2006).....	11, 20
<i>Liposome Co. v. Vestar, Inc.</i> , 1994 WL 738952 (D. Del. 1994).....	10
<i>Metabolite Labs, Inc. v. Lab. Cor. of Am. Holdings</i> , 370 F.3d 1354 (Fed. Cir. 2004).....	12
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005) (en banc), <i>cert.denied</i> , 126 S. Ct. 1332 (2006).....	8, 9, 11
<i>Pitney Bowes, Inc. v. Hewlett-Packard Co.</i> , 182 F.3d 1298, 51 U.S.P.Q.2d 1161 (Fed. Cir. 1999)	11
<i>Tanabe Seiyaku Co., Ltd. v. United States International Trade Commission</i> , 109 F.3d 726 (Fed. Cir. 1997).....	10
<i>Vitronics Corp. v. Conceptronic, Inc.</i> , 90 F.3d 1576, 39 U.S.P.Q.2d 1573 (Fed. Cir. 1996)	8, 9, 11, 19

OTHER AUTHORITIES

www.freedictionary.com/annular	13
www.freedictionary.com/annulus	13
www.dictionary.com/reference/browse/annular	13
www.dictionary.com/reference/browse/annulus	13
www.merriam-webster.com/dictionary/annular	13
www.merriam-webster.com/dictionary/annulus	13

I. Introduction

A. Background

Counterclaim Plaintiffs and Third Party Plaintiffs, Serva Corporation and Serva Group (collectively, "Serva"), have accused Allen, Allen & Associates LLC ("AAA") and Allen, Allen & Associates Manufacturing LLC ("AAAM") (collectively, the "Allen Companies") and Thomas E. Allen ("Tom Allen") of infringing U.S. Patent No. 6,749,330 (the "'330 patent"). The Allen Companies and Thomas E. Allen are referred to collectively as the "Allen Parties."

The Allen Companies are family companies owned and operated by Tom Allen and his wife, Yimei Allen. Tom Allen was a prolific inventor of numerous technologies and has been awarded over 40 patents. Mr. Allen acquired renown in the industry for his innovations in powder mixing technology, which have application in well completion operations, among other uses. AAA offered consulting services.

Tom Allen, through AAA, served as a consultant to Serva for a number of years, during which time Serva was acquired by a private investment firm, Wexford Capital. Following the acquisition, Serva purchased some intellectual property from Mr. Allen and from AAA and continued to retain the consulting services of Mr. Allen. Tom Allen and the Allen Companies were free to provide consulting services to others, and they retained the rights to the intellectual property created. The parties did not enter into a noncompete agreement.

In October, 2010, Serva sent the Allen Companies and Tom Allen a cease and desist letter accusing them of infringing the '330 patent and asserting that a new powder mixer invented by Mr. Allen infringed the '330 patent. The Allen Parties attempted to settle the dispute with Serva but to no avail and filed suit in this Court requesting a declaratory judgment of noninfringement. Serva counterclaimed against Mr. Allen and the Allen Companies and brought

a third-party complaint against Mr. Allen, accusing the Allen Parties of wilfully infringing the '330 patent and asking for punitive damages.

In a tragic turn of events, Tom Allen died in an automobile accident on January 12, 2012. Serva's former employee, who was in the car with Mr. Allen, fortunately survived the accident. The Estate of Thomas E. Allen and Yimei Allen, as Personal Representative of the Estate of Thomas E. Allen, have been substituted as parties for Thomas E. Allen, individually, and are referred to herein with the Allen Companies collectively as the "Allen Parties."

B. The '330 Patent

1. Inventorship

Tom Allen is the inventor of the '330 patent as well as numerous other patents relating to powder mixing technology and other oil industry technologies. A copy of the '330 patent is attached as Exhibit "A." At the time it issued, the '330 patent was the latest in a series of patents directed to powder mixing technology awarded to Mr. Allen. Tom Allen's creative progeny includes U.S. Patent No. 4,979,829, U.S. Patent No. 5,046,855, U.S. Patent No. 5,571,281, and the '330 patent. Most recently, Tom Allen posthumously was awarded patents on his latest powder mixing innovations, U.S. Patent No. 8,192,070 ("the '070 patent") and U.S. Patent No. 8,215,823 ("the '823 patent"). Copies of the '070 patent and the '823 patent are attached as Exhibits "B" and "C," respectively. Tom Allen also has received patents on these inventions in Canada and China. Serva claim that Mr. Allen's newly patented mixer infringes the '330 patent.

2. Summary of the Invention of the '330 Patent

The machine disclosed in the '330 patent is a mixer for mixing dry powders with liquids, such as cement and water for well completions. In order to transform a drilled well into a producing well, the well bore is completed with casing to support the walls of the bore. Cement

slurry mixed at the surface is pumped into the wellbore to displace drilling fluids and seal the space between the casing and the sides of the bore.

During completion operations, the '330 mixer blends the cement slurry before it is pumped into the wellbore. Cement slurry, comprising a mixture of water and cement powder, is recirculated to the mixer via annular recirculation flow inlets provided on the mixer and also via a central recirculation line provided on the mixer. ('330 patent, col. 3, ll. 65 – col. 4, ll. 1-3). The central recirculation line delivers recirculation flow centrally within the mixing chamber. ('330 patent, col. 4, ll. 46-48).

One of the objects of the invention is to provide both a centrally located recirculation jet and a plurality of equally spaced annular recirculation jets. ('330 patent, col. 3, ll. 37-39). Therefore, in addition to the central recirculation line, slurry is recirculated to the mixer via multiple, parallel recirculation outlets which discharge into the mixing chamber. ('330 patent, col. 4, ll. 11-24). These recirculation outlets are provided annularly and also deliver recirculation flow annularly to the mixing chamber. ('330 patent, col. 4, ll. 43-46).

Another object of the invention is to provide a plurality of annular water jet outlets located at alternate positions from the annular recirculation outlets. ('330 patent, col. 3, ll. 44-36). To that end, the mixer also is supplied with multiple, parallel and elongated water jet outlets that discharge into the mixing chamber. ('330 patent, col. 4, ll. 24-29). The water jet outlets are formed by a fixed part and a cooperating moveable part, movable by a rotatable water metering valve element, such that when that rotatable water metering valve element is rotated, the size of the orifice of the elongated jet outlet is changed. ('330 patent, col. 4, ll. 35-40). These water jet outlets deliver mix water annularly to the mixing chamber. ('330 patent, col. 4, ll. 43-46).

The water jet outlets are located so that they alternate with and are evenly spaced relative to the annular flow recirculation outlets. ('330 patent, col. 4, ll. 40-43). The elongated metering slots of the water jet outlets are equally spaced and alternately located between the recirculation outlets. ('330 patent, col. 4, ll. 59-62).

Dry bulk cement powder is introduced centrally through a central bulk cement powder inlet. ('330 patent, col. 6, ll. 45-49).

Serva assert that the Allen Parties infringe claims 11-14 and 17-19 of the '330 patent. Of these, claims 11 and 17 are independent claims while the remainder are dependent claims. Independent claims 11 and 17 of the '330 patent reads as follows, with the disputed claim terms highlighted:

Claim 11. A powder mixer for mixing a dry powder with liquid comprising:

a powder mixer being provided ***annularly*** with recirculation outlets that discharge into a mixing chamber of the powder mixer for continuously recirculating wetted powder mixture ***annularly*** into said mixing chamber; and

said powder mixer being provided ***annularly*** with adjustable water jet outlets in ***alternating arrangement*** with said recirculation outlets that discharge into the mixing chamber for regulating the amount of mix water introduced ***annularly*** into said mixing chamber of the powder mixer.

Claim 17. A power mixing method for mixing powder for use in high volume mixing applications comprising:

introducing recirculating wetted powder via recirculation outlets provided ***annularly*** in said mixer ***annularly*** into a mixing chamber of a powder mixer,

introducing a regulated amount of mix water via adjustable water jet outlets located in said mixer in ***alternating arrangement*** with said recirculation outlets into said mixing chamber, and

introducing dry bulk powder via a bulk powder inlet provided in said mixer into said mixing chamber centrally within the recirculation outlets so that the mix water and recirculating wetted powder mixture thoroughly wet and mix with the dry bulk powder.

II. CLAIM CONSTRUCTION LAW

The principles applied to interpret disputed claim terms are set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), *cert.denied*, 126 S. Ct. 1332 (2006). Claim construction begins with the words of the claim. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582, 39 U.S.P.Q.2d 1573, 1576 (Fed. Cir. 1996).

Claim construction analysis focuses on the "intrinsic" evidence, comprised of: (1) the actual language of the patent claim itself; (2) the "specification" of the patent, which is all of the text of the patent document and the drawings; and (3) the "prosecution history" (a/k/a, the "file wrapper"), which includes all of the materials presented to or received from the U.S. Patent and Trademark Office, much like the "court file" of a civil suit. The Court may refer to extrinsic evidence, such as experts, to gain background perspective or seek guidance in construing the claims. *Key Pharmaceuticals v. Hercon Laboratories Corp.*, 161 F.3d 709, 48 U.S.P.Q.2d 1911 (Fed. Cir. 1998).

A. Intrinsic Evidence

Courts do not look at claim terms in a vacuum. "Rather, they are part of 'a fully integrated instrument,' consisting principally of a specification that concludes with the claims. For that reason, claims 'must be read in view of the specification, of which they are a part.'" *Id.* at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978-79 (Fed. Cir. 1995)). *Phillips* identified several sources of evidence to aid courts in construing disputed claim terms, including "the words of the claims themselves, the remainder of the specification, the prosecution history, any extrinsic evidence concerning relevant scientific principles, the meaning of technical terms and the state of the art." *Id.* at 1314 (quoting *Innova*, 381 F.3d at 1116). Intrinsic evidence is considered first in construing a disputed term's meaning. *Id.* at 1317. "[T]he claims themselves provide substantial guidance as to the meaning of particular claim

terms," and "the specification 'is always highly relevant to the claim construction analysis. Usually it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id.* at 1314-1315 (quoting *Vitronics*, 90 F.3d at 1582).

The intrinsic evidence from the patent specification may reveal special meanings for claim terms that differ from otherwise normal meanings. "In such cases, the inventor's lexicography governs." *Id.* at 1316. On the other hand, "the specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor. In that instance as well, the inventor has dictated the correct claim scope, and the inventor's intention, as expressed in the specification, is regarded as dispositive." *Id.*

B. Prosecution History

A patent's prosecution history may also be considered in claim construction because it is evidence of how the inventor understood the patent. *Phillips*, 415 F.3d at 1317 (quoting *Markman*, 52 F.3d at 980) ("a court should also consider the patent's prosecution history, if it is in evidence"). Statements made during prosecution of the patent are important because they were expressed by the inventor in attempting to explain and obtain a patent. "The prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Vitronics*, 90 F.3d at 1582-83. "The purpose of consulting the prosecution history in construing a claim is to "exclude any interpretation that was disclaimed during prosecution.'" *Phillips*, 415 F.3d at 1317.

Prosecution histories of corresponding applications in foreign countries also are relevant. The Federal Circuit has held that representations to foreign patent offices must be considered when such matters comprise relevant evidence. *Caterpillar Tractor Co. v. Berco, S.p.A.*, 714

F.2d 1110 (Fed. Cir. 1983); *Tanabe Seiyaku Co., Ltd. v. United States International Trade Commission*, 109 F.3d 726 (Fed. Cir. 1997) (representations made to foreign patent offices are relevant to determine interchangeability). In addition, several district courts and the International Trade Commission have relied on statements in foreign prosecution histories to construe claim terms. See *Intellectual Prop. Dev., Inc. v. UA-Columbia Cablevision of Westchester, Inc.*, 2002 WL 10479 (S.D.N.Y. 2002) (relied on statements made to a Canadian and British patent offices when prosecuting counterparts to construe claim term); *Liposome Co. v. Vestar, Inc.*, 1994 WL 738952 (D. Del. 1994) (statements made to a European examiner relevant to show how a person skilled in the art would interpret the claim); *Certain Sortation Sys*, 2002 WL 1492633 (U.S.I.T.C.) (ITC held statements made during prosecution of foreign counterparts for claim construction purposes is well-recognized by trial courts).

C. Extrinsic Evidence and Expert Testimony

Courts may also consider extrinsic evidence, particularly expert testimony, to shed light on the patent at issue. "[T]rial courts generally can hear expert testimony for background and education on the technology implicated by the presented claim construction issues. . . ." *Key Pharmaceuticals v. Hercon Laboratories Corp.*, 161 F.3d 709, 716, 48 U.S.P.Q.2d 1911 (Fed. Cir. 1998) (quoting *Markman*, 52 F.3d at 980-81, 34 U.S.P.Q.2d at 1330-31 ("The court may, in its discretion, receive extrinsic evidence for the court's understanding of the patent...."). Courts have broad discretion in this regard. *Id.*

Expert testimony is particularly useful on issues of claim construction. "No doubt there will be instances in which the intrinsic evidence is insufficient to enable the court to determine the meaning of the asserted claims, and in those instances, extrinsic evidence . . . may . . . properly be relied upon to understand and construe the claims." *Id.* at 716-17 (quoting *Vitronics*,

F. 3d at 1584). In fact, it is preferable for a court to consult trustworthy extrinsic evidence to sync claim construction with understandings in the pertinent technical field. "Certainly, there are no prohibitions in *Vitronics* on courts hearing evidence from experts. Rather, *Vitronics* merely warned courts not to rely on extrinsic evidence in claim construction to contradict the meaning of claims discernible from thoughtful examination of the claims, the written description, and the prosecution history. . . ." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308-09, 51 U.S.P.Q.2d 1161, 1168 (Fed. Cir. 1999).

D. The Accused Product

To assist in understanding what the claims cover, and the practical consequence of any construction ruling, the Court may also refer to the accused product and other products covered by the patent claims. *See Lava Trading, Inc. v. Sonic Trading Management, L.L.C.*, 445 F.3d 1348, 1350 (Fed. Cir. 2006) ("Without the vital contextual knowledge of the accused products or processes, this appeal takes on the attributes of something akin to an advisory opinion on the scope of the [patent in suit]").

III. DISCUSSION

A. Level of Ordinary Skill in the Field of Powder Mixers

Patent claims are construed according to their ordinary and customary meaning, specifically, "the meaning that the terms would have to a person of ordinary skill in the art in question at the time of the invention. . . ." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc), *cert.denied*, 126 S. Ct. 1332 (2006). "[T]he person of ordinary skill in the art is deemed to read the claim terms not only in the context of the particular claim in which the disputed terms appears, but in the context of the entire patent, including the specification." *Id.*

A person of ordinary skill in the art is one who creates equipment and methods of the type covered by the claims. See *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1257 (Fed. Cir. 2007) (skill relevant to claimed pharmaceutical composition is "creation of a compound used to treat ear infections"). The actual level of skill of the patent's inventor is one highly relevant factor in assessing the level of ordinary skill. See *Daiichi Sankyo*, 501 F.3d at 1257. Thus, the relevant skill here is creation of powder mixers and methods.

The relevant field here, creation of powder mixers and methods, is **not** limited to mixers used in the oil field. The '330 patent states: "The usage of this invention is not limited to the oil and gas industry, but could be used in other industries where dry bulk powders must be mixed into a solution, such as for example the food preparation industry." ('330 patent, col. 9, ll. 40-43).

The level of ordinary skill in the powder mixer field is a bachelor's degree in mechanical engineering and several years of practical experience in machine design. That skill level roughly matches that of Tom Allen, the inventor of the '330 patent.

B. Claim Construction

There are two disputed terms in the independent claims at issue in this case: "annularly" and "alternating arrangement."

1. "Annularly"

Both claims 11 and 17 use the term "annularly." The '330 patent does not expressly define the term "annularly" so it should be given its customary meaning. See *Metabolite Labs, Inc. v. Lab. Cor. of Am. Holdings*, 370 F.3d 1354, 1360 (Fed. Cir. 2004) ("Indeed, normal rules of usage create a 'heavy presumption' that claim terms carry their customary meaning in the relevant community at the relevant time."

While the term "annularly" is not defined in a dictionary, it derives from "annular," which derives from "annulus," both of which are defined in several dictionaries. "Annulus" means a

ring, and "annular" means shaped like a ring. See www.freedictionary.com/annular ("*ring-shaped; of or forming a ring*"); www.freedictionary.com/annulus ("*ring-like figure, part, structure or marking*"); www.dictionary.com/reference/browse/annular ("having the form of a *ring*"); www.dictionary.com/reference/browse/annulus (a *ring*; a *ring-like* part, band or space); www.merriam-webster.com/dictionary/annular (of or relating to or forming a *ring*); www.merriam-webster.com/dictionary/annulus (a part, structure, or marking resembling a *ring*). Accordingly, the ordinary meaning of "annulus" and "annular" should be used to define the adverb "annularly" as meaning "in a manner that is shaped like or forming a ring."

2. "Alternating Arrangement"

Claims 11 and 17 of the '330 patent use the phrase "alternating arrangement." In claim 17, the water jet outlets are "located in said mixer in ***alternating arrangement*** with said recirculation outlets." In claim 1, the mixer is "provided annularly with adjustable water jet outlets in ***alternating arrangement*** with said recirculation outlets" To give meaning to the phrase "alternating arrangement," there must be some line or other structure on which, or around which, the recirculation outlets and water jet outlets "alternate."

Considered in the abstract, an "alternating arrangement" means one after the other, in succession. Applied to the claims in this case, however, the term "alternating" is ambiguous because it needs a geometric context to have meaning. For example, the X's and O's in this diagram alternate around a circle.

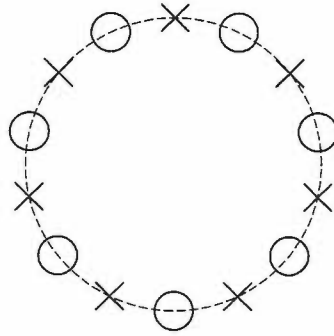


Figure 1

But, if the circle is eliminated and replaced with a straight line, the X's and O's do not alternate either along or around that straight line. Instead, they all sit on one side of line, as shown in Figure 2.

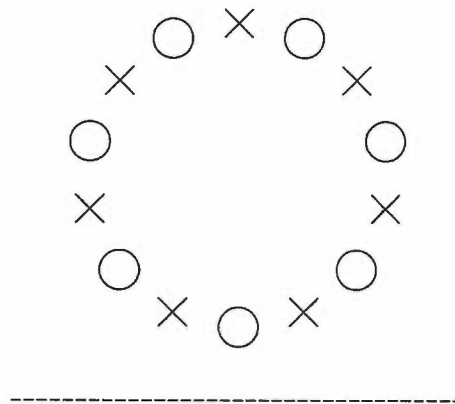


Figure 2

Consider another example where the X's and O's alternate with respect to each other about the straight line in Figure 3.

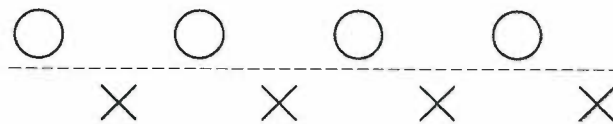


Figure 3

But, if the point of reference, *i.e.*, the straight line, is removed, as shown in Figure 4, the X's and O's do not alternate at all. Instead, the X's and O's form two lines of like objects but they do not alternate without a reference point.

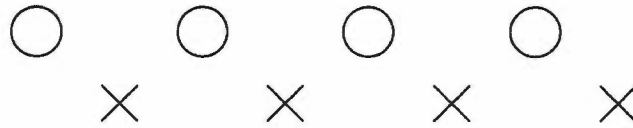


Figure 4

Suppose that the X's in Figure 4 are in one plane and the O's are in another plane. The task of determining whether the two sets of objects alternate is compounded in three-dimensional space. There must be a reference point for determining the spatial relationship between two objects. Therefore, if two sets of objects are in "alternating arrangement," there must be some geometric structure, such as a line, circle or annulus, to use as a point of reference.

3. Claim 17

a. "Annularly" and "Alternating Arrangement"

Turning now to the claims, claim 17 defines a powder mixing method that uses a mixer. Wetted powder mixture is introduced "via recirculation outlets provided ***annularly*** in said mixer ***annularly*** into a mixing chamber of a powder mixer." Given its common and ordinary meaning, "annularly" means in a manner that is shaped like or forming a ring. So, the recirculation outlets are provided in a manner that is shaped like or forming a ring, and the wetted powder mixture is introduced into the mixing chamber in a manner that is shaped like or forming a ring.

Claim 17 further requires that mix water be introduced "via adjustable water jet outlets located in said mixer in ***alternating arrangement*** with said recirculation outlets." Without knowing the respective positions of the recirculation outlets and the water jet outlets, it is impossible to know whether they are in "alternating arrangement."

To give meaning to the phrase "alternating arrangement," there must be some geometric structure to use as a reference. The only geometric structure specified in claim 17 is the annulus of the recirculation jets. Therefore, the "alternating arrangement" of the water jet outlets must be around the "annulus," or ring, about which the recirculation outlets are arranged. In other words, the water jet outlets and the recirculation outlets are at the same radial and axial positions on the mixer.

This construction is consistent with the specification and drawings of the '330 patent which show the recirculation outlets and water jet outlets arranged one after another about a single annulus or ring. (See Figures 3, 4 and 5; and col. 7, ll. 42-46 of the '330 patent). Figures 5 and 6, which are extracted from Figs. 4 and 5 of the '330 patent, show the water jet outlets, indicated by the color blue, equally spaced between recirculation outlets, indicated by the color orange. These drawings show that both the recirculation outlets and the water jet outlets are provided on the same annulus, or ring.

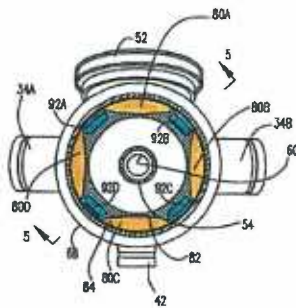


Figure 5: Fig. 4 from the '330 patent

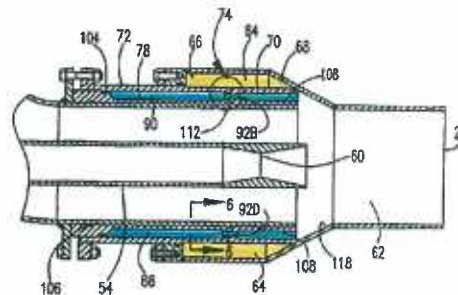


Figure 6: Fig. 5 from the '330 patent

In fact, the recirculation outlets and the water jet outlets of the '330 mixer must alternate because they are on the same annulus. If they did not alternate, one set of jets would block flow from the other set of jets.

Likewise, in Figure 7, the commercial embodiment of the '330 mixer provides the water jet outlets on the same annulus as the recirculation outlets. Both sets of jets are provided on the

same, single ring. That is, both sets of jets are in the same plane, at the same radial and axial positions on the '330 mixer.



Figure 7

By using the annulus of the recirculation outlets as the point of reference, it can be determined whether the water jet outlets and the recirculation outlets are in alternating arrangement. Therefore, "alternating arrangement" means that the water jet outlets and the recirculation outlets are arranged one after another, in succession, around the same annulus, or ring.

b. Central Recirculation Line

Although not expressly recited in the claim, claim 17 of the '330 patent requires a central recirculation line by admission of the applicant in a statement made before the Canadian Intellectual Property Office. During prosecution of Canadian Patent No. 2382708, which corresponds to the '330 patent and claims priority from it, the applicant argued that the method of claims 20-23 (which correspond to claims 17-19 of the '330 patent) requires a central recirculation line. The applicant relied on this statement to distinguish claims 20-23 over the cited prior art. The applicant distinguished claim 20 by stating that it requires a central recirculation line which was lacking in the prior art.

"With regard to claims 20-23, the present application differs from the prior art in that the present invention has a non-adjustable central recirculation line instead of the adjustable central water line provided in the prior art."

See Exhibit "D" comprising a copy of the September 15, 2004 Remarks in response to the Examiner's Report of March 17, 2004. A copy of the original claims in Canadian Patent No. central recirculation line, by virtue of the applicant's admission, claim 17, which corresponds to claim 20, requires a central recirculation line.

The Federal Circuit has held that representations to foreign patent offices must be considered when such matters comprise relevant evidence. *Caterpillar Tractor Co. v. Berco, S.p.A.*, 714 F.2d 1110 (Fed. Cir. 1983). Statements made during the prosecution of corresponding applications before a foreign patent office are relevant. The applicant's blatant admission that claims 20-23 (claims 17-19 in the '330 patent) require a central recirculation line in order distinguish over the cited prior art is relevant to the construction and understanding of the claims in the related '330 application, from which the Canadian patent claims priority. Accordingly, per the applicant's own admission, claim 17 requires a central recirculation line.

4. Claim 11

Claim 11 is similar to claim 17 but defines a powder mixer, rather than a powder mixing method. Claim 11 uses the term "annularly" repeatedly, reciting "a powder mixer being provided *annularly* with recirculation outlets that discharge . . . *annularly* into said mixing chamber" and "being provided *annularly* with adjustable water jet outlets . . . that discharge into the mixing chamber for regulating the amount of mix water introduced *annularly* into said mixing chamber"

The only potentially important difference between claim 11 and claim 17 is that claim 11 requires that the recirculation outlets are provided annularly and discharge annularly also that the water jet outlets are provided annularly and introduce mix water annularly into the mixing

chamber. As in claim 17, the water jet outlets and recirculation outlets in claim 11 are "in alternating arrangement." Claim 11 also requires that the powder mixer be "provided annularly with adjustable water jet outlets in *alternating arrangement* with said recirculation outlets" The words of claim 11 say nothing about the respective positions of the recirculation outlets annulus and the water jet outlets annulus.

The text of claim 11 is ambiguous as to whether the multiple uses of "annularly" with respect to each set of outlets reference the same annulus (as in claim 17) or different annuli. The best way to resolve this ambiguity is to consult the patent specification, which is the "single best guide to the meaning of a disputed term." See *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). As discussed above, the '330 patent specification and drawings show the recirculation outlets and water jet outlets arranged one after another about a single annulus or ring. The specification thus shows that the two sets of outlets provided "annularly" in claim 11 reference the same, single annulus.

In summary, in claim 11, "annularly" means "in a manner that is shaped like or forming a ring. "Alternating arrangement" means that the water jet outlets and the recirculation outlets are arranged one after another, in succession, around the same annulus, or ring.

To the extent that any doubt is left after consulting the patent specification, the Court may consider expert testimony about the meaning of "annularly." The Allen Parties plan to offer the testimony of Dr. Raymond Neathery, a mechanical engineer with skill in machine design. Dr. Neathery confirms that the usages of "annularly" in claims 11 and 17 designate the same annulus and that "alternating arrangement" requires that the water jet outlets and the recirculation outlets be provided on the same annulus. Dr. Neathery's Preliminary Report is attached as Exhibit "F."

C. Application of the Proposed Construction to the Accused Allen Mixer

To assist in understanding what the claims cover, and the practical consequence of any construction ruling, the Court may also refer to the accused product and other products covered by the patent claims. *See Lava Trading, Inc. v. Sonic Trading Management, L.L.C.*, 445 F.3d 1348, 1350 (Fed. Cir. 2006) ("Without the vital contextual knowledge of the accused products or processes, this appeal takes on the attributes of something akin to an advisory opinion on the scope of the [patent in suit]").

In the accused Allen mixer, the water jet outlets and the recirculation outlets are provided on two different annuli. The recirculation outlets are arranged about one annulus, and the water jet outlets are arranged downstream about a separate, second annulus. As shown in Figure 8 below, the water jet outlets (indicated by the color blue) of the Allen mixer are located axially downstream from the recirculation outlets (indicated by the color orange). Furthermore, the water jet outlets are offset at a wider radial position than the recirculation jets. The commercial embodiment the Allen mixer, pictured in Figure 9, distinctly

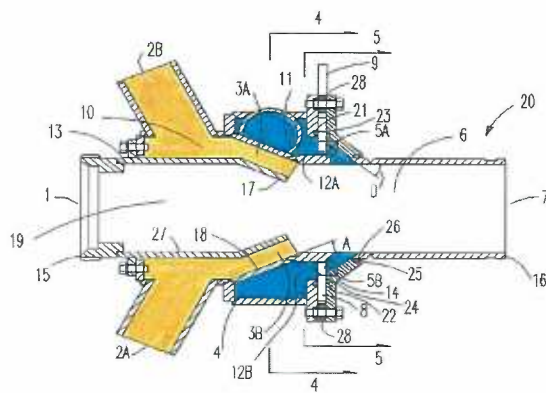


Figure 8: The Allen Mixer



Figure 9: The Allen Mixer

shows the water jet outlets and the recirculation outlets provided on two separate annuli. The two sets of jets are in different planes and located at different axial and radial positions on the Allen mixer. As a result, there is no single annulus on the Allen mixer that contains both the recirculation outlets and water jet outlets nor is there a single annulus from which fluids from the recirculation outlets and water jet outlets are discharged annularly into the mixing chamber.

The Allen mixer embodies another important difference. The two sets of jets do not alternate; they are sequential. The recirculation outlets are upstream from the water jet outlets so that the fluid from the water jet outlets follows in the fluid stream from the recirculation outlets. The mix water intersects the recirculation slurry rather than alternates with it.

Additionally, the Allen mixer lacks a central recirculation line.

The '330 patent neither describes nor claims a mixer provided with water jet outlets and recirculation outlets arranged on different annuli. The '330 patent neither describes nor claims a mixer provided with outlets that are sequential rather than alternating. The '330 patent stresses the importance of alternating the outlets, and, in fact, the outlets *must* alternate in the claimed invention because they are provided on the same annulus.

III. CONCLUSION

There are two disputed claim terms in the independent claims of the '330 patent: "annularly" and "alternating arrangement." The Allen Parties ask the Court to adopt the following constructions:

For both claims 11 and 17, annularly means "in a manner that is shaped like or forming a ring." The word "annularly" as used with reference to the recirculation outlets and water jet outlets designates the same, single ring (or annulus). "Alternating arrangement" means that the

water jet outlets and the recirculation outlets are arranged one after another, in succession, around the same annulus, or ring.

Claim 17 requires a central recirculation line by reason of the applicant's admissions before the Canadian Intellectual Property Office.

Respectfully submitted,

s/Margaret S. Millikin

Margaret S. Millikin, OBA #13836

Gerald L. Jackson, OBA #17185

CROWE & DUNLEVY

A Professional Corporation

500 Kennedy Building

321 South Boston Avenue

Tulsa, OK 74103-3313

(918) 592-9820

(918) 599-6306 (Facsimile)

margaret.millikin@crowedunlevy.com

gerald.jackson@crowedunlevy.com

-and-

Gary Peterson, OBA #7068

Attorney At Law

211 N. Robinson Ave.

Suite 450 South

Oklahoma City, Oklahoma 73102

(405) 606-3367

gp@garypeterson.com

CERTIFICATE OF SERVICE

I hereby certify that on August 6, 2012, I electronically transmitted the foregoing document with exhibits to counsel of record:

John A. Kenney
john.kenney@mcafeetaft.com

Jessica John Bowman
jessica.johnbowman@mcafeetaft.com

Michael J. LaBrie
mike.labrie@mcafeetaft.com

Matthew S. Gibson
matt.gibson@mcafeetaft.com

s/Margaret S. Millikin
Margaret S. Millikin